

Amendments to the Claims:

Kindly cancel claims 2-6 without prejudice.

Kindly amend claim 1 and add new claims 21-33 as follows.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) An apparatus for generating and feeding moisture, comprising:

a reactor having an upstream gas inlet side, a downstream moisture outlet side and a catalyst for generating moisture from hydrogen and oxygen, wherein the reactor generates moisture from hydrogen and oxygen by catalytic reaction at a temperature of not higher than 450°C; and

means for reducing pressure provided on the downstream side of the reactor, and disposed so that moisture leaving and fed from said reactor is reduced in pressure by the means for reducing pressure while an internal high pressure in the reactor is maintained, wherein the means for reducing pressure comprises one or more components selected from the group consisting of an orifice, a valve, a capillary and a filter;

a first reactor structural component having a material gas supply joint defining a material gas supply passage;

a second reactor structural component having a moisture gas take-out joint defining a moisture outlet passage, wherein the first reactor structural component and the second

reactor structural component are mated to form a reactor shell having an interior space, and wherein the second reactor structural component defines an inside wall surface;

a first reflector disposed in the interior space to face the material gas supply passage;

a second reflector disposed in the interior space to face the moisture outlet passage, wherein the first reflector and the second reflector are identical flat plates symmetrically disposed in the interior space; wherein the catalyst comprises a platinum coated catalyst layer provided on the inside wall surface of the second reactor structural component; and

a process chamber, wherein the reactor is connected to feed moisture gas to the process chamber, wherein the moisture gas fed into the process chamber is reduced in pressure by the means for reducing pressure.

2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)

7. (Withdrawn) A reactor for generating moisture, having an inlet side and an outlet side, comprising:

a first reactor structural component on the inlet side of the reactor having an outside wall;

a second reactor structural component on the outlet side of the reactor having an outside wall, wherein the first and second components are mated for form a reactor shell having an interior space;

a material gas supply passage provided in the first reactor structural component disposed to supply material gases into the interior space;

a material gas supply joint connected to the material gas supply passage;

a moisture gas outlet passage provided in the second reactor structural component to lead out moisture from the interior space;

a moisture gas take-out joint connected to the moisture gas outlet passage;

fin base plates attached to the outside walls of the first and second components;

and

a plurality of fins disposed on the fin base plates.

8. (Withdrawn) A reactor for generating moisture according to claim 7, further comprising: a heater disposed on the outside wall of the second component, and a heater pressing plate disposed on an outside of the heater, wherein the fin base plate is attached to an outside of the heater pressing plate.

9. (Withdrawn) A reactor for generating moisture according to claim 7 wherein said heat dissipation fins are disposed symmetrically about the material gas supply joint.

10. (Withdrawn) A reactor for generating moisture according to claim 8 wherein said heat dissipation fins are disposed symmetrically about the material gas supply joint.

11. (Withdrawn) A reactor for generating moisture according to claim 7 wherein said heat dissipation fins are disposed symmetrically about the moisture gas take-out joint.

12. (Withdrawn) A reactor for generating moisture according to claim 8 wherein said heat dissipation fins are disposed symmetrically about the moisture gas take-out joint.

13. (Withdrawn) A reactor for generating moisture according to claim 9, wherein said fins are axially symmetrical about said material gas supply joint.

14. (Withdrawn) A reactor for generating moisture according to claim 10, wherein said fins are axially symmetrical about said material gas supply joint.

15. (Withdrawn) A reactor for generating moisture according to claim 9, wherein said fins are axially symmetrical about said moisture take-out joint.

16. (Withdrawn) A reactor for generating moisture according to claim 10, wherein said fins are axially symmetrical about said moisture take-out joint.

17. (Withdrawn) A reactor for generating moisture according to claim 9, wherein said fins are centrally symmetrical about said moisture take-out joint.

18. (Withdrawn) A reactor for generating moisture according to claim 10, wherein said fins are centrally symmetrical about said moisture take-out joint.

19. (Withdrawn) A reactor for generating moisture according to claim 7, wherein said heat dissipation fins comprise surfaces treated with alumite.

20. (Withdrawn) A reactor for generating moisture according to claim 8, wherein said heat dissipation fins comprise surfaces treated with alumite.

21. (NEW) An apparatus for generating and feeding moisture according to claim 1, wherein the first reflector and the second reflector each include a peripheral portion inclined in cross-section.

22. (NEW) An apparatus for generating and feeding moisture according to claim 21, wherein internal pressure within the process chamber is 1-100 Torr.

23. (NEW) An apparatus for generating and feeding moisture, comprising:
a reactor having an upstream gas inlet side, a downstream moisture outlet side and a catalyst for generating moisture from hydrogen and oxygen, wherein the reactor

generates moisture from hydrogen and oxygen by catalytic reaction at a temperature of not higher than 450°C;

means for reducing pressure provided on the downstream side of the reactor, and disposed so that moisture leaving and fed from said reactor is reduced in pressure by the means for reducing pressure while an internal high pressure in the reactor is maintained, wherein the means for reducing pressure comprises one or more components selected from the group consisting of an orifice, a valve, a capillary and a filter;

a first reactor structural component having a material gas supply joint defining a material gas supply passage;

a second reactor structural component having a moisture gas take-out joint defining a moisture outlet passage, wherein the first structural component and the second structural component are mated to form a reactor shell having an interior space, and wherein the second component defines a inside wall surface;

a reflector disposed in the interior space, wherein the reflector is a thick plate; wherein the catalyst comprises a platinum coated catalyst layer provided on the inside wall surface of the second reactor structural component; and

a process chamber, wherein the reactor is connected to feed moisture gas to the process chamber, wherein the moisture gas fed into the process chamber is reduced in pressure by the means for reducing pressure.

24. (NEW) An apparatus for generating and feeding moisture according to claim 23, wherein the reflector includes a peripheral portion inclined in cross-section.

25. (NEW) An apparatus for generating and feeding moisture according to claim 24, wherein internal pressure within the process chamber is 1-100 Torr.

26. (NEW) An apparatus for generating and feeding moisture, comprising:
a reactor having an upstream gas inlet side, a downstream moisture outlet side and a catalyst for generating moisture from hydrogen and oxygen, wherein the reactor generates moisture from hydrogen and oxygen by catalytic reaction at a temperature set in the range of 300°C to 450°C;

means for reducing pressure provided on the downstream side of the reactor, and disposed so that moisture leaving and fed from said reactor is reduced in pressure by the means for reducing pressure while an internal high pressure in the reactor is maintained, wherein the means for reducing pressure comprises one or more components selected from the group consisting of an orifice, a valve, a capillary and a filter;

a first reactor structural component having a material gas supply joint defining a material gas supply passage;

a second reactor structural component having a moisture gas take-out joint defining a moisture outlet passage, wherein the first structural component and the second structural component are mated to form a reactor shell having an interior space, and wherein the second component defines a inside wall surface;

a first reflector disposed in the interior space; wherein the catalyst comprises a platinum coated catalyst layer provided on the inside wall surface of the second reactor structural component; and

a process chamber, wherein the reactor is connected to feed moisture gas to the process chamber, wherein the moisture gas fed into the process chamber is reduced in pressure by the means for reducing pressure.

27. (NEW) An apparatus for generating and feeding moisture according to claim 26, wherein the first reflector is a thick plate that includes a peripheral portion inclined in cross-section.

28. (NEW) An apparatus for generating and feeding moisture according to claim 26, further comprising a second reflector disposed in the internal space to face the moisture outlet passage, wherein the first reflector is disposed in the internal space to face the material gas supply passage, and the first reflector and the second reflector are identical flat plates symmetrically disposed in the interior space.

29. (NEW) An apparatus for generating and feeding moisture according to claim 28, wherein the first reflector and the second reflector each include a peripheral portion inclined in cross-section.

30. (NEW) An apparatus for generating and feeding moisture according to claim 26, wherein internal pressure within the process chamber is 1-100 Torr.

31. (NEW) An apparatus for generating and feeding moisture according to claim 26, wherein the set catalytic reaction temperature is selected from the group consisting of 300°C, 350°C and 400°C.

32. (NEW) An apparatus for generating and feeding moisture according to claim 26, wherein a temperature difference between the set temperature and an ignition point of hydrogen is set between 190°C and 230°C.

33. (NEW) An apparatus for generating and feeding moisture according to claim 32, wherein the apparatus generates moisture at a rate of 2000 cc/minute.

Amendments to the Drawings:

The attached two sheets of drawings include changes to Figures 1 and 7. Specifically, Figure 1 has been amended to add previously omitted element “WVG” to label the “reactor WVG for generating moisture” in accordance with the present specification, page 10, line 13. Figure 7 has been amended to designate that this drawing illustrates “Prior Art” in accordance with MPEP § 608.02(g).

The two sheets attached herewith replace the two corresponding original sheets of drawings. Two annotated sheets of drawings, showing changes in red ink, are also attached herewith.

Attachment: Two Replacement Sheets

Two Annotated Sheets Showing Changes.